



October 20, 1998

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Mr. Chris Stoker
Integrated Environmental Services, Inc.
3990 Westerly Place, Suite 210
Newport Beach, California 92660

**Change Order No. 2 and Cost Estimate
Additional Groundwater Sampling and Analysis
Boeing C-6 Facility, Parcel C
Torrance, California**

Dear Mr. Stoker:

As requested, Harding Lawson Associates (HLA) is submitting this change order and cost estimate for the additional groundwater sampling and analysis outlined in a facsimile from Anderson Cheng of your office on October 13, 1998. HLA understands the goal of this work is to collect and analyze additional groundwater samples from the 18 groundwater monitoring wells scheduled to be sampled from October 19 to 21, 1998. Field monitoring of an additional groundwater parameter using specialized measuring equipment is also required. The original approved contract and cost estimate included laboratory analysis using EPA Test Method 8260 and field measurement of groundwater pH, temperature, and electrical conductivity.

SCOPE OF WORK

Additional activities include the following:

- Conduct field measurement of the additional groundwater parameter, dissolved oxygen (DO).
- Collect and package additional samples from each well for additional laboratory analyses.
- Submit up to 21 groundwater samples to Orange Coast Analytical laboratory for analysis of carbon dioxide, chloride, ethane and methane, dissolved iron (Fe^{+2}), and nitrate/nitrite.
- Include results in a brief written report.

COST AND SCHEDULE

The cost for additional groundwater sampling and analysis described in this change order is based on the information provided to HLA at this time. HLA proposes to conduct the above scope of work on a time-and-materials basis. HLA's estimated cost to complete this scope of work is \$1,124 (see attachment). Note that laboratory analytical costs will be invoiced directly to IES. These costs are estimated to be approximately \$4,092.



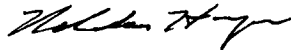
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Field activities will require approximately ½ day beyond the original estimated period. Laboratory analysis will require approximately 1 to 2 weeks following the conclusion of field activities. The brief written report will require an additional 5 days following receipt of laboratory analytical results. HLA initiated monitoring and sampling of the scheduled groundwater monitoring wells on October 19, 1998.

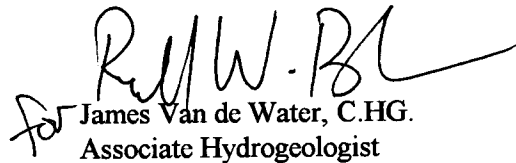
We look forward to working with you on this and future assignments. Please contact the undersigned if you have any questions regarding this proposal.

Yours very truly,

HARDING LAWSON ASSOCIATES



Nicholas Hagen
Senior Geologist
Project Manager



for James Van de Water, C.HG.
Associate Hydrogeologist

NH/JV/hk
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Attachment: Detailed Cost Estimate

ATTACHMENT
DETAILED COST ESTIMATE

Attachment

Cost Estimate for Collection and Additional Analysis of Groundwater Samples Boeing C-6 Facility

Task 1 - Collect and Analyze Groundwater Samples

Field Technician (Mike Palmer or Wes Haydock)	6 hours	@	\$ 55 /hr	\$ 330
Markup (Labor)			2%	\$ 7
Equipment (includes Dissolved Oxygen Meter)	3 days	@	\$ 55 /day	\$ 165
Truck	0.5 day	@	\$ 60 /day	\$ 30
Total Task 1				\$ 532

Task 2 - Data Reporting / Letter Report

Associate Hydrogeologist (Jim Van de Water)	1 hour	@	\$ 105 /hr	\$ 105
Senior Hydrogeologist (Nick Hagen)	5 hours	@	\$ 90 /hr	\$ 450
Word Processing (Heather Khuu)	0.5 hour	@	\$ 50 /hr	\$ 25
Markup (Labor)			2%	12
Total Task 2				\$ 592

TOTAL \$ 1,124

Laboratory Analyses (Invoices will be directed to IES)

Chloride	EPA Method 325.3	20 each	@	\$ 21.00 /ea	\$ 420
CO ₂	No Method Specified	20 each	@	\$ 63.00 /ea	\$ 1,260
Ethane/Methane	8015-M (GC-FID)	20 each	@	\$ 75.60 /ea	\$ 1,512
Iron	EPA Method 6010A	20 each	@	\$ 20.00 /ea	\$ 400
Nitrate/Nitrite	EPA Method 353.3	20 each	@	\$ 25.00 /ea	\$ 500

Laboratory Cost Estimate \$ 4,092